

## The highs and lows of group homogeneity

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### Abstract

Two experiments yielded further evidence for the ingroup homogeneity effect (Kelly, C., 1989. Political identity and perceived intragroup homogeneity. *Br. J. Soc. Psychol.* 28, 239–250; Simon, B., 1992. The perception of ingroup and outgroup homogeneity: reintroducing the intergroup context. In: Stroebe, W., Hewstone, M. (Eds.), *Eur. Rev. Soc. Psychol.* Vol. 3. Wiley, Chichester; Simon, B., Brown, R., 1987. Perceived intragroup homogeneity in minority-majority contexts. *J. Personal. Soc. Psychol.* 12, 463–468.). In the first experiment, with the aim of investigating the effect of the context of judgment, we asked psychology students to judge the variability of psychologists or of social workers (one-group conditions) or to judge both groups (two-group condition) on dimensions typical of psychologists and on dimensions typical of social workers. As predicted, whereas an ingroup homogeneity effect was found for the dimensions typical of the ingroup in the two-group condition, no asymmetry in perception of group variability emerged in the one-group conditions. In the second experiment, we examined the effect of ingroup identification in an explicit intergroup situation. In line with predictions, high identifiers perceived greater homogeneity in the ingroup than in the outgroup. In contrast, low identifiers displayed the opposite tendency. The impact of context and social identification on group entitativity is considered in its cognitive and motivational aspects. © 1998 Elsevier Science B.V.

*Keywords:* Group variability; Entitativity; Ethnocentrism; Social identity

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“...This was not the first time this group had pitched camp at Sebastia; on several previous occasions, they had been removed without undue trouble. This time, however, by significant

coincidence, world Jewish leaders were assembled that same day in Jerusalem, in a show of solidarity with Israel in the wake of a UN General Assembly resolution equating Zionism with racism. Obviously, we wanted to enhance that solidarity—not point up division within our own ranks.” (Shimon Peres, 1995)

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## 1. Introduction

The outgroup homogeneity effect, or the tendency to perceive greater differences within groups one is a member of than within groups one does not belong to, has long been a basic tenet of research on intergroup perceptions (Allport, 1954; Sherif and Sherif, 1969; for reviews, see Leyens et al., 1994; Oakes et al., 1994). The current popularity of this topic may be explained by the progressive awareness that the study of group variability judgments should help to understand the stereotyping process. As a matter of fact, a number of researchers (Linville et al., 1986; Park and Judd, 1990; Ostrom et al., 1993) presented cognitive accounts for the finding that members of an outgroup all seem to look similar whereas ingroup members are relatively more differentiated (Quattrone and Jones, 1980; Quattrone, 1986; Messick and Mackie, 1989; Mullen and Hu, 1989; Ostrom and Sedikides, 1992; Haslam et al., 1996). Taking issue with the universal status of the outgroup homogeneity effect, Simon and Brown (1987) built upon social identity theory (Tajfel and Turner, 1979; Tajfel, 1981) to offer an alternative motivational account of the perception of group variability. Specifically, these authors argued that perception of group variability may in fact fluctuate across circumstances. Therefore, it may have less to do with knowledge about the groups or information processing constraints than with strategic moves on the part of group members. The present set of studies aims at contributing to this debate by showing that the context of judgment and the level of identification may both contribute to the perception of group variability.

## 2. The cognitive view on group homogeneity

Although the social cognition literature reveals a wide consensus about the existence of an outgroup homogeneity effect, there is much less agreement regarding the underlying cognitive mechanisms. Virtually all contemporary cognitive models share the assumption that familiarity with the groups members comes as the most important

determinant of the outgroup homogeneity effect. Crucial distinctions exist, however, as to the exact consequences of such differential familiarity on the judgments of group variability.

Linville et al. (1986, 1989) provide what can be seen as the purest example of the familiarity hypothesis. The basic mechanism underlying Linville's exemplar-based model is that the information regarding each encounter with a category member is stored in memory. When perceivers want to make a variability judgment, they need to retrieve a sample of category members from their memory. According to Linville (Linville and Jones, 1980; Linville, 1982) the greater the number of group exemplars they can bring to mind the less polarized the judgments about this group will be. Because people are more familiar with their own group than with the outgroup and thus, have more ingroup than outgroup members stored in memory, the ingroup will be perceived as being more heterogeneous than the outgroup. In other words differential familiarity with ingroups versus outgroups and the resulting memory for individual exemplars of the ingroup and the outgroup are seen as the direct causes for outgroup homogeneity.

More recently, Judd and Park (Judd and Park, 1988; Park and Judd, 1990; Park et al., 1991) proposed a dual-storage model in which the information about group members is mainly stored in the form of category-level abstractions. These abstractions do not only comprise estimates of the central tendency and of the variability of the groups on various dimensions, they also are spontaneously and continuously updated when new encounters occur (Park and Hastie, 1987). Perceivers can count on abstract information about a group as a whole as well as on additional exemplar information regarding particular group members and subgroups. According to Park and colleagues, perceivers are not only more familiar with the ingroup than with the outgroup, they also seem to differentiate the ingroup into more subunits than the outgroup (Park and Rothbart, 1982; Park et al., 1992). Besides, they seem to be more aware of the individuality of ingroup compared to outgroup members (Park and Judd, 1990). Thus, the dual-storage model posits that

people encode and retrieve information about ingroup and outgroup members somewhat differently. Whereas perceivers rely on preexisting beliefs about the group as a whole when asked to make judgments about the outgroup, they base their impression on additional exemplars and subtypes when judging the ingroup. As a result, outgroup variability judgments are likely to be made in an on-line fashion whereas ingroup variability judgments will be comparatively memory-based.

In a third cognitive model of perceived group variability, Ostrom et al. (1993) also adopt a differential processing hypothesis. These authors argue that people structure the information about the ingroup in terms of person categories whereas the information about the outgroup is structured in terms of stereotype-related attribute categories. When people need to make variability judgments, they search their knowledge structure. As a consequence, they retrieve individuating information for the ingroup members and attribute-based information for the outgroup members.

Other approaches propose variations on these general themes. For instance Kraus et al. (1993) proposed a frequency distribution model to account for the processes underlying variability judgments and the outgroup homogeneity effect. According to this model perceivers spontaneously generate mental frequency distributions that summarize the number of group members at different levels of an attribute dimension. Each level can be conceptualized as a subtype of the group regarding the dimension. Moreover, this model holds that perceivers encode ingroup members in a greater number of different levels, i.e. subtypes, along the continuum. When perceivers need to make variability judgments, the number of levels of the distribution they retrieve from memory determines the perceived degree of variability of the group on the particular attribute. An outgroup homogeneity effect emerges because perceivers are more likely to retrieve a large number of subtypes for the ingroup than for the outgroup. In yet another model Kashima and Kashima (1993) presented evidence in support of a dual predictor model in

which variability judgments are essentially based on the similarities and differences among the group exemplars retrieved in memory.

Although these various approaches reviewed above differ in terms of the specific cognitive mechanisms ruling the encoding and use of group-related information, the general assumption remains that familiarity is a key feature of group variability judgments. Despite the substantial empirical support for these cognitive models a number of empirical findings remain problematic (Jones et al., 1981). In one of the studies generally taken to support the outgroup homogeneity effect Park and Rothbart (1982) observed that their participants recalled significantly more subordinate attributes of the same-sex than of the opposite-sex group despite the fact that they were equally familiar with ingroup and outgroup members. Along the same lines, outgroup homogeneity has been observed for minimal groups, that is, in situations where people know absolutely nothing about the members of the ingroup or the outgroup (Tajfel et al., 1971; Wilder, 1984). So, for instance, Wilder and Thompson (1980) assigned people to minimal groups and asked them to indicate the different positions that would be endorsed either by ingroup or outgroup members. The results indicated that participants thought that the range of position of ingroup members would be greater than that of outgroup members.

In a recent minimal group study Park and Judd (1990) report that the ingroup is perceived to be more variable even if one controls for the pieces of information provided about the ingroup and about the outgroup. These authors conclude that 'something more' than familiarity or amount of information is at work. To complicate matters even more Judd and Park (1988) found that the anticipation of competition between groups led participants not only to judge the outgroup to be more homogeneous than the ingroup but also to remember more individual characteristics of the outgroup members. Thus, it seems very difficult to argue that outgroup homogeneity is a simple consequence of the familiarity with and of the information collected about groups.

### 3. Motivational foundations of group variability judgments

Adopting a social identity perspective (Turner, 1975; Tajfel, 1978; Tajfel and Turner, 1979; Tajfel, 1982), Simon (Simon and Brown, 1987; Simon and Mummendey, 1990; Simon and Pettigrew, 1990; Simon, 1992) challenged the monopolistic status of the outgroup homogeneity effect. He argued that certain factors may lead group members to see less variability in their own groups compared to the other group (for a meta-analysis supporting this conclusion see Mullen and Hu, 1989). One important factor affecting people's variability judgments would be the relative size of the groups. Because members of a minority may feel threatened in terms of their self-esteem, one strategy for them is to conceive of their group as a closely knit group (Simon, 1992). To test this conjecture, Simon and Brown (1987) assigned participants to minimal groups of different sizes, supposedly on the basis of their identification of ambiguous blue-green slides as blue or green. As expected, they found that minority members identified more strongly with their group and reported a smaller range in the color recognition capabilities in their ingroup (Simon and Pettigrew, 1990). In sum, members of a minority would rely on a perceptual bias in order to see their group as a real entity and thereby improve their self-esteem (but see Bartsch and Judd, 1993; Haslam and Oakes, 1995; Judd and Bartsch, 1995; Simon, 1995).

An important lesson of the research program launched by Simon (1992) is that people may benefit from perceiving their ingroup as being homogeneous rather than heterogeneous. Several empirical findings suggest that this is indeed the case (Kelly, 1989; Marques et al., 1988; Lee and Ottati, 1993; Doosje et al., 1995; Lee and Ottati, 1995). For instance, a study by Lee and Ottati (1995) examined how negative views of the ingroup may threaten social identity and lead to the perception of more ingroup homogeneity. The participants of the study were Chinese students enrolled in an American university. The experimenter asked them to read three application files, each comprising a recommendation letter. One

application file belonged to a person with a Chinese name. For a third of the participants, the recommendation letter did not mention any particular stereotype. For a second third of the participants, the applicant possessed a series of consistent stereotypic traits, that is, traits that belong to the autostereotype of most Chinese people (e.g. inhibited). The last third of the participants read that the recommendation letter ascribed inconsistent stereotypic traits to the applicant, that is, traits that most Chinese individuals would perceive as unmerited and inaccurate (e.g. dishonest). As predicted by Lee and Ottati (1995) participants confronted with the consistent stereotypic traits saw the group as being more heterogeneous than control participants did. In contrast, participants given inconsistent stereotypic traits perceived the group as being more homogeneous than participants in the control condition did. According to Lee and Ottati (1995) participants facing consistent traits, i.e. traits that can hardly be disputed, tend to see more diversity in their group. In contrast the threat introduced by the inconsistent traits leads to a strong negative reaction. Participants close ranks. Interestingly, the general pattern is more pronounced when participants' group membership is made salient beforehand by asking participants to specify their own ethnic background.

In a similar vein, Marques et al. (1988) suggested that a condemnation of one's own group members constitutes another strategy for group members to cope with a threatening situation. In a series of studies these authors showed that a negative behavior may be judged more harshly if it is performed by an ingroup rather than by an outgroup member. This 'black sheep' effect is likely to emerge when the behavior is negative and is related to the very definition of the group (Marques and Yzerbyt, 1988; Branscombe et al., 1993; for a review see Marques and Paez, 1994).

In light of the available evidence, there is thus little doubt that motivational factors may have a major impact on the perception of group homogeneity. The temporary salience of group membership could be another important determinant of the perception of group variability. Lee and Ottati (1995) found that control participants

whose category membership had been primed perceived the ingroup to be more homogenous than the outgroup. This finding suggests that the cognitive accessibility of one's group membership may in and of itself moderate the perception of group variability. In fact, the importance of this factor has been the focus of recent theoretical and empirical work.

#### 4. The contextual basis of ingroup homogeneity

Is the idea of an encompassing group, or an entity, likely to be more salient when we, psychologists, think about lawyers than when we think about psychologists? More generally, do we more readily think in terms of a group when we think about 'them' rather than about 'us'? A number of authors answer positively to this question. Building upon early insights by Tajfel and Wilkes (Tajfel and Wilkes, 1963; Tajfel, 1969), self-categorization theory (Turner, 1982, 1985; Turner et al., 1987) proposes that people tend to appraise ingroups at a lower level than inclusiveness than outgroups (Brewer, 1993; Oakes et al., 1994; Turner et al., 1994). Coming back to the above example, when psychologists think about psychologists, they likely have in mind a series of subgroups, of exemplars, etc. When they think about lawyers, chances are that they compare lawyers with some contrasting category, most likely their own, and that they stress the similarities among lawyers and the differences between lawyers and this other category. This means that, unless the boundaries of the ingroup are made salient, an outgroup homogeneity effect is likely to emerge when people who evaluate the ingroup are compared to people who evaluate the outgroup (Yzerbyt and Schadron, 1996; Yzerbyt et al., 1997).

An unpublished study by Schadron (1991) provides one of the earliest empirical illustrations of the above intuition. The study involved old and young participants. All participants received two pictures, one representing a series of people waiting for the train, the other representing a series of people in a nature park. Whereas half of the participants saw old people on both pictures, the remaining participants were shown young people.

Finally, the picture was labelled either in an undefined way (e.g. 'people at the station') or in a more explicit way (e.g. 'young people in a nature park'). The participants were asked to examine the first picture and to indicate to what extent these people had similar or different opinions about TV programs (an attribute unrelated to age according to a pretest). The question for the second picture was the critical one and differed according to the age of the people in the picture. Indeed, the participants rated the extent to which the people had similar or different opinions about fashion for the young targets, or religion for the old targets. These dimensions were stereotypical of one group and counterstereotypical of the other group. As expected Schadron found that the ingroup was perceived to be more homogeneous than the outgroup in the presence of an explicit label whereas the outgroup was thought to be more homogeneous than the ingroup in the absence of such a label.

Schadron's manipulation assumes that the introduction of an explicit label defining the ingroup makes the existence of an outgroup salient and directs perceivers' attention to ingroup similarities rather than ingroup differences. Confronting perceivers with an explicit intergroup comparison provides an even more radical way to make the outgroup salient. In this case, the level of inclusiveness switches from the ingroup category to the larger category comprising both the ingroup and the outgroup. In a very simple study, Doosje et al. (1993) observed that psychology students perceived more similarity in the ingroup when asked to estimate the variability within psychology and within sociology students rather than within psychology students alone. More recently, Haslam et al. (1995) also suggested that the judgmental context may account for the prevalence of the outgroup homogeneity effect. These authors argue that the outgroup homogeneity effect is largely the consequence of the concrete operation of data collection, i.e. the experimenters fail to ask the same participants to evaluate the ingroup and the outgroup, rather than the result of 'inherent differences in the representation of ingroups and outgroups'.

To test their hypothesis, Haslam et al. (1995) (experiment 1) asked their subjects to judge both the ingroup and the outgroup or only the ingroup or the outgroup. As expected, the outgroup homogeneity was observed in the one-group conditions but vanished entirely in the two-group condition. A second study (Haslam et al., 1995, experiment 2) replicated this finding and further showed that an intergroup comparison context always increased the homogeneity of the ingroup even when the valence of the judgment traits was controlled for. In sum, the comparison context plays a major role in orienting perceivers toward intragroup or, instead, toward intergroup differences. These data also suggest that the order of presentation of the ingroup and the outgroup may often (but does not have to) make a difference. Whereas judging the ingroup first would be likely to direct attention on interpersonal differences within the ingroup, judging the ingroup last is likely to foster consideration of interpersonal similarities among the ingroup members as opposed to the outgroup members (for a debate on this point see Haslam and Oakes, 1995; Judd and Bartsch, 1995; Simon, 1995).

### **5. The selection of relevant dimensions**

The above findings lend credence to the idea that the outgroup is more spontaneously perceived as a group than the ingroup. Although these various studies address the issue of judgmental context in an innovative way, a series of limitations make it difficult to draw firm conclusions. A first difficulty resides in the use of percentage estimates as a measure of homogeneity. As a matter of fact, percentage estimates are more readily taken to be a measure of stereotype endorsement (Park and Judd, 1990). Besides, such estimates tie into the beliefs about the central tendency and tend to be confounded with ethnocentrism. It may therefore be instructive to investigate the impact of the judgmental context using a set of measures that are more unequivocally related to perceived variability.

A more important problem of the available studies is that they compare the dispersion of the

ingroup and of the outgroup on different characteristics. Schadron (1991), for instance, collected similarity ratings on a dimension stereotypically associated with young persons or stereotypically associated with elderly. In the studies of Haslam et al. (1995) participants first selected a limited number of traits and then indicated the percentage of people in the target group to whom these traits applied. As it turns out the selection of a proper set attributes is a tricky issue. Some authors like Judd and Park (1988) very much insist that all groups be evaluated on the same set of positive and negative stereotypic and counterstereotypic characteristics. These authors argue that one can only establish the presence of an outgroup homogeneity effect independent from the ethnocentrism by looking at the difference between stereotypic and counterstereotypic attributes. In sharp contrast, self-categorization theorists recommend asking participants only about traits for which there is a normative connection with the group. From this perspective ingroup members would hardly accept negative ingroup traits as being appropriate descriptors. A related problem is the fact that the outgroup homogeneity effect has been observed even in situations where both the ingroup and the outgroup were being rated by the same participants (Judd and Park, 1988; Park and Judd, 1990; Simon and Mummendey, 1990; Judd et al., 1991). According to Haslam et al. (1995) one way to account for this discrepancy is precisely to argue that participants are generally presented with a set of positive and negative attributes. Because participants certainly want to avoid associating their ingroup with negative traits, their answers may produce the outgroup homogeneity effect.

One way to deal with the selection problem may be to retain those positive traits that are associated with both groups while being relatively more associated with one group than with the other. This should also take care of a problem encountered by Simon (Simon and Mummendey, 1990; Simon and Pettigrew, 1990; reported in Simon, 1992). In order to show that the relevance of the specific attribute directly influences the variability judgments Simon randomly assigned participants to one of two groups, allegedly on

the basis of artistic preference for one of two painters. They were then asked to judge the perceived likability of ingroup and outgroup paintings by ingroup and outgroup members. Not surprisingly participants judged their ingroup to be more homogeneous regarding the appreciation of the ingroup paintings and the outgroup to be more homogeneous regarding the appreciation of the outgroup paintings. Because it is hard to think that the participants would perceive the ingroup to be more heterogeneous than the outgroup on the very dimension that justifies its existence, the interpretation of the interaction between target group (ingroup versus outgroup) and dimension (painter of the ingroup versus painter of the outgroup) seems somewhat problematic.

In the context of these issues our first study examined the impact of the judgmental context using a more satisfactory set of traits and various measures of variability and central tendency. Participants were presented with a series of four typical attributes. Their task was to estimate the distribution of either one of two groups or of both groups on each of these attributes. Because the attributes were always more typical of one group than of the other we predicted the emergence of ingroup favoritism for the attributes typical of the ingroup and outgroup favoritism for the attributes typical of the outgroup. However, because the four attributes were all positive we also predicted that outgroup favoritism would likely be outweighed by ethnocentric concerns and be much weaker than the ingroup bias.

As far as homogeneity was concerned we did not expect any outgroup homogeneity effect in the one-group conditions because participants were only confronted with positive characteristics. In contrast, we predicted that the two-group condition would lead to an ingroup homogeneity effect for the attributes typical of the ingroup and an outgroup homogeneity effect for the attributes typical of the outgroup. Again, because all four attributes were positive and that motivational concerns may enter the picture, we expected the outgroup homogeneity effect to be substantially weaker than the ingroup homogeneity effect.

## 6. Study 1: method

### 6.1. Participants

Eighty-four first year psychology students of the Catholic University of Louvain at Louvain-la-Neuve volunteered to participate in the experiment.

### 6.2. Procedure

Three versions of a questionnaire were handed out during the break of a first year class at the Department of Psychology. All instructions were written on the first page and allowed the manipulation of our main independent variable, i.e. the judgmental context.

In the first one-group condition, participants read that they were to indicate their opinion about psychologists by means of a distribution task (Linville et al., 1986). Specifically, they learned that “we would like you to point out the way in which, in your opinion, the group of psychologists share a series of characteristics. In order to do this, think of the way in which a group of 100 psychologists is distributed on a scale representing a specific characteristic. In the seven cells, you have to write a number between 0 and 100 that symbolizes the percentage of psychologists who have this characteristic at the level indicated by the scale. The total of the numbers you write down must be equal to 100 (all 100 people in the group, no more no less, need to be located on the scale!). Here is an example:...” We provided participants with one example using the attribute ‘tall’ in order to maximize the clarity of the instructions. In the second one-group condition, the same set of questions was asked using social workers as the target group.

In the two-group condition, participants were warned that they would have to rate the social workers as well as the psychologists on a series of dimensions. The same instruction as those used for the one-group conditions were then provided for the social workers and repeated for the psychologists. Thus, the intergroup context was made explicit to the participants.

After the presentation of the initial example, the questionnaire proposed four scales using four traits, two typical of the psychologists and two typical of the social workers. The order of presentation of the four dimensions was the same for all participants.

### 6.3. Materials

We carried out a pretest in order to uncover the typical attributes of two groups, psychologists and social workers. Research shows that the context of judgment greatly influences the traits associated with any particular social category (Tversky, 1977; Oakes et al., 1994). Because some of our participants were to rate the variability of both groups, we used a pretest measure that mentioned the two groups in an unambiguous way. One-hundred first-year psychology students at the University of Louvain indicated whether they thought each of 41 positive personality traits was more typical of psychologists than of social workers, more typical of social workers than of psychologists, typical of both psychologists and social workers, or simply irrelevant. We selected the two traits rated most typical of psychologists, i.e. rigorous and theoretically trained, and the two traits rated most typical of social workers, i.e. warm and spontaneous, as the critical judgmental attributes.

## 7. Results

For each of the four distributions, we computed the central tendency  $M$  ( $M = \sum_{i=1,n} P_i X_i$ , where  $P_i$  denotes the probability for the  $i$ th level, and  $X_i$  is the scale value for this  $i$ th level), the standard deviation (S.D.;  $S.D. = \sqrt{\sum_i P_i (X_i - M)^2}$ ) and the probability of differentiation  $Pd$  ( $Pd = 1 - \sum_{i=1,n} P_i^2$ ). Whereas the first score provides an index of ethnocentrism or ingroup bias, the two latter scores constitute two slightly different indexes of variability (Linville et al., 1986). We then averaged the indexes pertaining to the two traits more typical of psychologists and those pertaining to the two traits more typical of social workers. Because some participants rated both target

groups whereas the rest of the participants only rated one target group, we decided to analyze the data by comparing the ratings of both groups within each judgmental context separately.

### 7.1. One-group condition

#### 7.1.1. Ingroup bias

We submitted the  $M$  index to a  $2 \times 2$  mixed ANOVA using target group (psychologists versus social workers) as between-subjects factor and trait typicality (typical of psychologists versus typical of social workers) as within-subject factor. Only the expected two-way interaction came out significant,  $F(1, 57) = 4.96$ ,  $P < 0.05$ . As can be observed in Table 1, the interaction is due to the high scores assigned to the ingroup on its typical traits. This was confirmed in a comparison opposing the scores in that particular cell to the three others,  $t(57) = 2.23$ ,  $P < 0.05$ , residual ns.

Table 1  
Ratings as a function of typicality of the traits, target group and judgment context

Target group	Traits typical of	
	Psychologists	Social workers
One-group		
Psychologists		
$M^a$	4.85	4.52
$Pd^b$	0.610	0.637
S.D. <sup>b</sup>	1.10	1.12
Social workers		
$M$	4.42	4.66
$Pd$	0.625	0.629
S.D.	1.01	1.18
Two-group		
Psychologists		
$M$	5.12	4.39
$Pd$	0.568	0.632
S.D.	0.977	1.12
Social workers		
$M$	4.42	4.45
$Pd$	0.647	0.637
S.D.	1.05	1.05

<sup>a</sup> For the  $M$  index high scores mean more positive evaluations.

<sup>b</sup> For both the  $Pd$  and S.D. index high scores mean great variability.



### 7.1.2. Perceived variability

We submitted the *Pd* and S.D. scores to a  $2 \times 2$  mixed ANOVA using target group (psychologists versus social workers) as between-subjects factor and trait typicality (typical of psychologists versus typical of social workers) as within-subject factor. No significant effect emerged for the *Pd* scores (see Table 1).

For the S.D. scores, the main effect of trait typicality came out significant,  $F(1, 57) = 4.18$ ,  $P < 0.05$ . The homogeneity of traits was greater when typical of psychologists than when typical of social workers, S.D. = 1.06 and 1.15, respectively.

## 7.2. Two-group condition

### 7.2.1. Ingroup bias

We analyzed the *M* scores by way of a 22 repeated measures ANOVA using target group (psychologists versus social workers) and trait typicality (typical of psychologists versus typical of social workers) as the two within-subject factors. The target group,  $F(1, 24) = 19.11$ ,  $P < 0.0002$ , came out as highly significant. The ingroup was rated more favourably than the outgroup ( $M_s = 4.75$  and 4.43 respectively). We also found a marginally significant trait typicality main effect,  $F(1, 24) = 3.40$ ,  $P < 0.07$ . The means for the traits typical of psychologists were higher than the means for the traits typical of social workers ( $M_s = 4.42$  and 4.77 respectively). More importantly, and in line with our predictions, the two-way interaction effect was also significant,  $F(1, 24) = 13.47$ ,  $P < 0.001$  (see Table 1). This interaction is exclusively due to the high scores assigned by the participants to the ingroup on its typical traits. Indeed, a comparison between the ratings in this cell and the three other cells proved to be significant,  $t(24) = 5.92$   $P < 0.0001$ , residual ns.

### 7.2.2. Perceived variability

We submitted the *Pd* and S.D. scores to a  $2 \times 2$  repeated measures ANOVA using target group (psychologists versus social workers) and trait typicality (typical of psychologists versus typical of social workers) as the two within-subject fac-

tors. As far as the *Pd* scores are concerned, the main effects of target group,  $F(1, 24) = 5.21$ ,  $P < 0.05$ , came out significant. The ingroup was perceived as more homogeneous than the outgroup ( $Pd = 0.600$  and 0.642 respectively). The trait typicality main effect,  $F(1, 24) = 4.42$ ,  $P < 0.05$ , was also significant. The homogeneity was greater for traits typical of psychologists than for those typical of social workers ( $Pd = 0.607$  and 0.634 respectively). As we predicted, the two-way interaction effect was also significant,  $F(1, 24) = 4.50$ ,  $P > 0.05$ . Table 1 shows that the interaction effect is entirely due to the perception of greater homogeneity among psychologists (i.e. the participants' ingroup) on their typical traits than in any other cell of the design,  $t(24) = 3.48$ ,  $P < 0.001$ .

Although the general pattern of the S.D. scores very much resembles that of the *Pd* scores, neither the target group nor the trait typicality managed to reach significance,  $F(1, 24) < 1$  and  $F(1, 24) = 2.15$ , both ns. Interestingly, though, the two-way interaction effect came close to a conventional level of significance,  $F(1, 24) = 3.65$ ,  $P < 0.06$ . As for the *Pd* scores, the contrast between the psychologist target/psychologists traits cell and the three others came out significant,  $t(24) = 2.31$ ,  $P < 0.05$ .

## 7.3. Combined analysis

An alternative way to look at the data is to compare the impact of the judgmental contexts on each group separately. We hypothesized that the participants would perceive their ingroup to be more homogeneous in the two-group judgmental context than when they were confronted with only one group. However, we expected this difference to emerge only for the typical traits. In contrast we predicted that this specific pattern would not emerge when participants evaluated the outgroup. Because our prediction did not concern simple effects but a specific interaction pattern we decided to analyze our data in a factorial design.

In line with our predictions, the ingroup was perceived to be more homogeneous on the typical traits when evaluated in the two-group context than in any other condition. (Because of the a

priori nature of the various comparisons discussed in this section, we performed unidirectional tests. This strategy also allows us to compensate for the relative loss of power caused by the use of a factorial design.) This finding certainly held true for the S.D.,  $t(114) = 1.66$ ,  $P < 0.05$ . Although the comparison involving the *Pd* scores did not reach a conventional level of significance,  $t(114) = 1.42$ ,  $P < 0.08$ , the means clearly were in the predicted direction. In contrast, the same comparison for the perception of the outgroup was far from being significant, both  $t(96) < 1$ , ns.

## 8. Discussion

In this first study, our participants evaluated the distribution of a series of four attributes for the ingroup only, for the outgroup only, or for both groups. Because we presented participants only with positive attributes, we had specific predictions concerning the central tendencies. Participants judged both kinds of attributes to be rather descriptive of the two groups. As expected they thought that the traits typical of the ingroup better corresponded to the ingroup than to the outgroup. No differences emerged for the traits typical of the outgroup. In other words we found an ingroup bias for those characteristics typical of the ingroup and no outgroup bias for those characteristics typical of the outgroup.

Participants also rated the traits typical of the ingroup to be more prevalent among the ingroup than the traits typical of the outgroup. The latter tendency is more pronounced in the two-group condition, suggesting that an explicit intergroup context may trigger the need to positively distinguish the ingroup from the outgroup.

The primary goal of Study 1 was to show that participants would perceive more homogeneity among ingroup than among outgroup members when the context of judgment stresses the comparison between the ingroup and a relevant outgroup. We further expected that this pattern would be true only for the traits more typical of the ingroup. The present results sup-

port this conjecture. When participants evaluated only one of two groups their ratings failed to show any asymmetry in the perception of group variability. More importantly, we observed no interaction between the target group and the typicality of the traits. Quite a different picture emerged when the same participants rated both groups. This time we found a clear ingroup homogeneity effect on the attributes typical of the ingroup. Although there were slight differences in the magnitude of the effect depending on whether we used the standard deviation or the probability of differentiation as an index of variability, the same pattern was found for both measures.

Globally, these results provide encouraging evidence for the idea that members of real groups tend to perceive relatively more homogeneity among ingroup members than among outgroup members on typical ingroup dimensions. The present findings directly speak to the limitation of the data of Simon (1992) on group relevant dimensions. Whereas Simon asked his subjects to rate the group variability on dimensions which defined the groups, we used attributes which were not strictly speaking defining dimensions of the groups. Despite these differences the present data reveal the presence of an unambiguous ingroup homogeneity effect for the attributes typical of the ingroup when the same participants rated the two groups.

One interesting feature of the present data is that we found no evidence at all for outgroup homogeneity. This was the case for both types of attributes in the one-group conditions and for the attributes typical of the outgroup in the two-group condition. According to earlier work on the impact of the judgmental context on the perception of variability, the one-group conditions should likely facilitate the emergence of outgroup homogeneity. One noticeable exception, though, is the findings of Haslam et al. (1995) that the one-group context did not lead to the perception of outgroup homogeneity when the list of attributes comprised only positive traits. In the present context the desirability of all four attributes may thus have prevented our participants from acknowledging greater ho-

mogeneity among outgroup than among ingroup members, even for attributes more typical of the outgroup than of the ingroup. Further support for this valence interpretation comes from the absence of outgroup bias for the attributes typical of the outgroup.

In fact the absence of outgroup homogeneity for three of the four critical comparisons along with the presence of ingroup homogeneity for attributes typical of the ingroup in the two-group condition strongly suggests that motivational concerns were at work. As we indicated above Haslam et al. (1995) (experiment 2) controlled for the valence of the traits that people could select. To a third of their participants they presented only positive traits. A second third of the participants received a list of negative traits. Finally the remaining participants were to select traits among positive and negative traits. In line with predictions the data of the two-group conditions revealed that the percentage estimates on the mixed set of traits were the same for the ingroup and the outgroup. More interestingly, whereas an outgroup homogeneity effect remained when the rating scales comprised only negative attributes, an ingroup homogeneity effect emerged when the rating scales included only positive attributes. These findings indicate that the perception of group variability may thus work hand in hand with the expression of ingroup favoritism. In other words the ingroup may come across as being less variable than the outgroup when positive traits are considered and more variable than the outgroup when negative traits are considered. As suggested by Haslam et al. (1995) such a pattern points to the role of motivational factors in the perception of group variability. Unfortunately, the fact that these authors used an entirely different set of traits for the ingroup and outgroup ratings along with the difficulty of interpreting percentage estimates minimizes the impact of their findings. More importantly, if motivational factors truly have an impact upon the perception of group homogeneity, then it seems most important to appreciate the influence of identity concerns. We decided to run a second study in order to address these issues more satisfactorily.

## 9. Study 2

Building upon social identity theory (Tajfel, 1981), and its later extension into self-categorization theory (Turner et al., 1987), it is reasonable to assume that people differ with respect to the subjective importance of their group membership. Although the social context may influence the temporary salience of a particular group membership, individuals are also likely to differ from one another in terms of their context-independent identification with various social groups (Luh-tanen and Crocker, 1992). To the extent that we distinguish participants with different levels of group identification we should be in a better position to examine the links between the perception of group variability and ethnocentrism (Kelly, 1989; Carpenter, 1993; Doosje et al., 1995). In line with this reasoning we decided to examine how psychology students with different levels of group identification (low and high identifiers) make variability judgments in an intergroup context. Specifically the task of the participants was to estimate the distribution of psychologists or social workers on a series of attributes, some typical of the psychologists, some of the social workers.

As far as ingroup bias is concerned we expected high identifiers to be more ethnocentric than low identifiers when judging the outgroup. In other words we predicted that high identifiers would deny the superiority of social workers on their typical traits. With respect to the perception of variability we expected high identifiers to display an ingroup homogeneity effect. Because of the positive valence of the traits we hypothesized that high identifiers would show this effect whether the traits were typical of the psychologists or typical of the social workers.

## 10. Study 2: method

### 10.1. Participants

Forty-one female psychology undergraduates of the Catholic University of Louvain at Louvain-la-Neuve volunteered to participate in the experiment for which they received partial credit.

Three weeks before we carried out the study 197 students provided their name and answered a bogus personality questionnaire. Among a series of 7-point items, six measured participants' identification with the group of psychologists. We computed a global identification score on the basis of four items (Cronbach's  $\alpha$  0.66) and contacted the 40 students who scored the lowest and the 40 who scored the highest on the identification scale. In total, 21 low-identifiers and 20 high identifiers showed up at the laboratory,  $M_s = 4.00$  and 5.78 for low and high identifiers respectively,  $F(1, 39) = 52.91$ ,  $P < 0.001$ .

### 10.2. Procedure

Participants were seated in front of a computer. The experimenter started a program comprising the various steps of the study. The first screen informed participants about the title of the experiment which was 'Personality and professional characteristics of psychologists and social workers: similarities and differences'. The insertion of this screen aimed at minimizing individual differences in the perception of the goal of the study. A series of instruction screens followed. Subjects learned about the homogeneity measure (see Study 1) and rated either psychologists or social workers on eight positive traits. Four traits were typical of psychologists and four were typical of social workers.

Next subjects estimated the relative proportion of psychologists and social workers. Specifically, the question was "What is the percentage of psychologists in the group comprising all psychologists and social workers of Belgium?"

At the end of the program, subjects were debriefed, thanked for their participation, and dismissed. The computer-presented instructions along with examples and systematic help given by the experimenter allowed all subjects to respond adequately to the questions.

## 11. Results

As in Study 1, we used the distributions to compute  $M$ , the S.D. and the  $Pd$  for each at-

Table 2  
Ratings as a function of typicality of the traits and target group

Target group	Traits typical of	
	Psychologists	Social workers
Psychologists		
$M^a$	5.12	4.73
$Pd^b$	0.62	0.63
S.D. <sup>b</sup>	1.10	1.15
Social workers		
$M$	4.49	5.21
$Pd$	0.70	0.66
S.D.	1.22	1.14

<sup>a</sup> For the  $M$  index high scores mean more positive evaluations.

<sup>b</sup> For both the  $Pd$  and S.D. index high scores mean great variability.

tribute. For each target group we averaged the indexes pertaining to the four traits more typical of psychologists and those pertaining to the four traits more typical of social workers. These data were submitted to a 2 (level of identification: high versus low identifiers)  $\times$  2 (target group: psychologists versus social workers)  $\times$  2 (trait typicality: psychologists versus social workers) mixed ANOVA with repeated measures on the last factor.

### 11.1. Ingroup bias

The ANOVA analysis on the  $M$  index revealed the presence of a marginal main effect of trait typicality,  $F(1, 37) = 2.44$ ,  $P < 0.12$ , indicating that the participants tended to ascribe the attributes typical of the outgroup more than the attributes typical of the ingroup (Table 2). This effect was qualified by a significant two-way interaction of target group by trait typicality,  $F(1, 37) = 22.68$ ,  $P < 0.0001$ . As can be seen in Table 2, the participants ascribed the various attributes more to their respective group than to the other group. More interestingly although the omnibus three-way interaction was clearly not significant,  $F = 1.18$ ,  $P < 0.29$ , the patterns for the high and the low identifiers showed interesting differences (Fig. 1). Whereas low identifiers de-

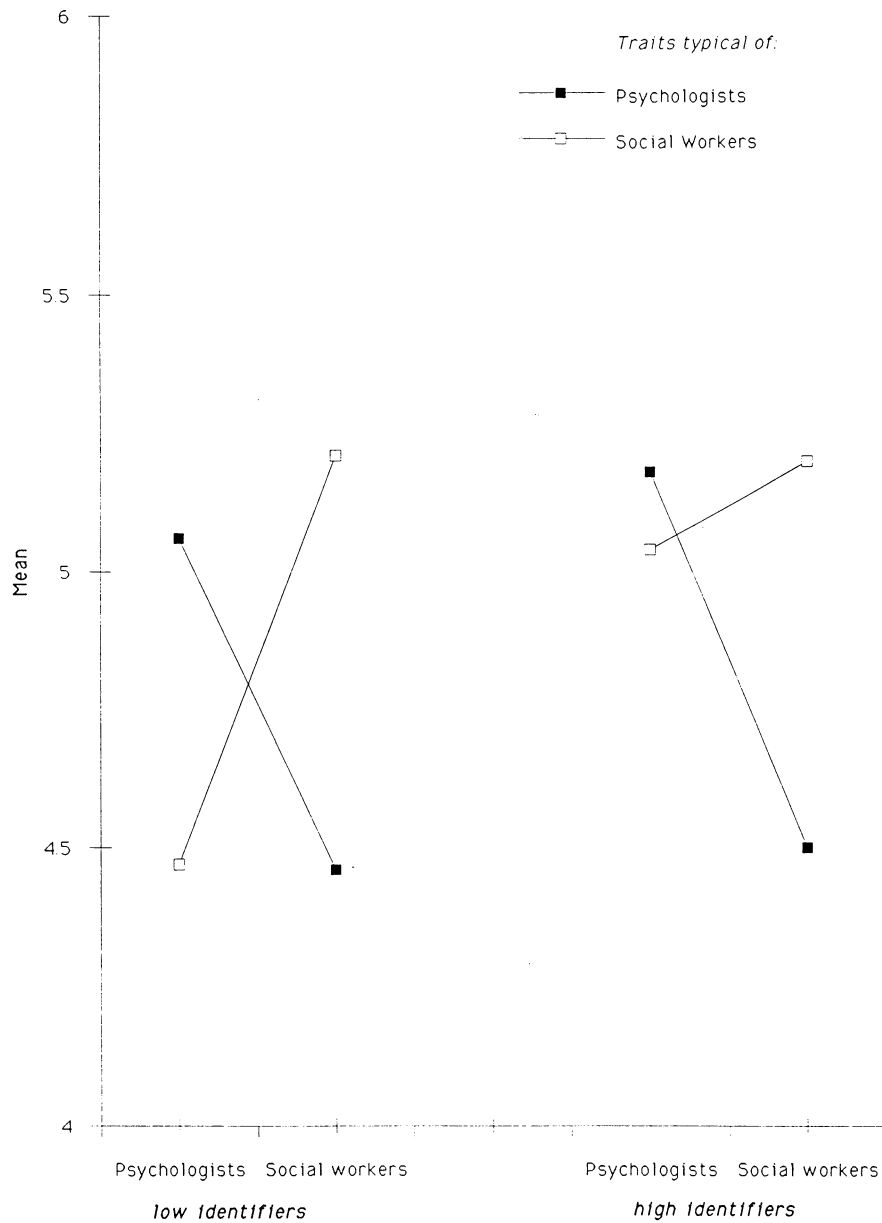


Fig. 1. Means as a function of identification, target group and trait typicality.

scribed each group more readily with the attributes typical of the group than with the attributes typical of the other group, both  $t$ 's (37) > 2.60,  $P < 0.01$ , high identifiers ascribe the attributes typical of the psychologists significantly less to the social workers than to the psychologists,  $t(37) = 2.94$ ,  $P < 0.005$ , but rated the at-

tributes typical of the social workers equally characteristic of both groups,  $t(37) = 0.71$ , ns.

### 11.2. Perceived variability

The ANOVA of the  $Pd$  index failed to reveal the presence of significant main effects, all  $F < 1$ ,

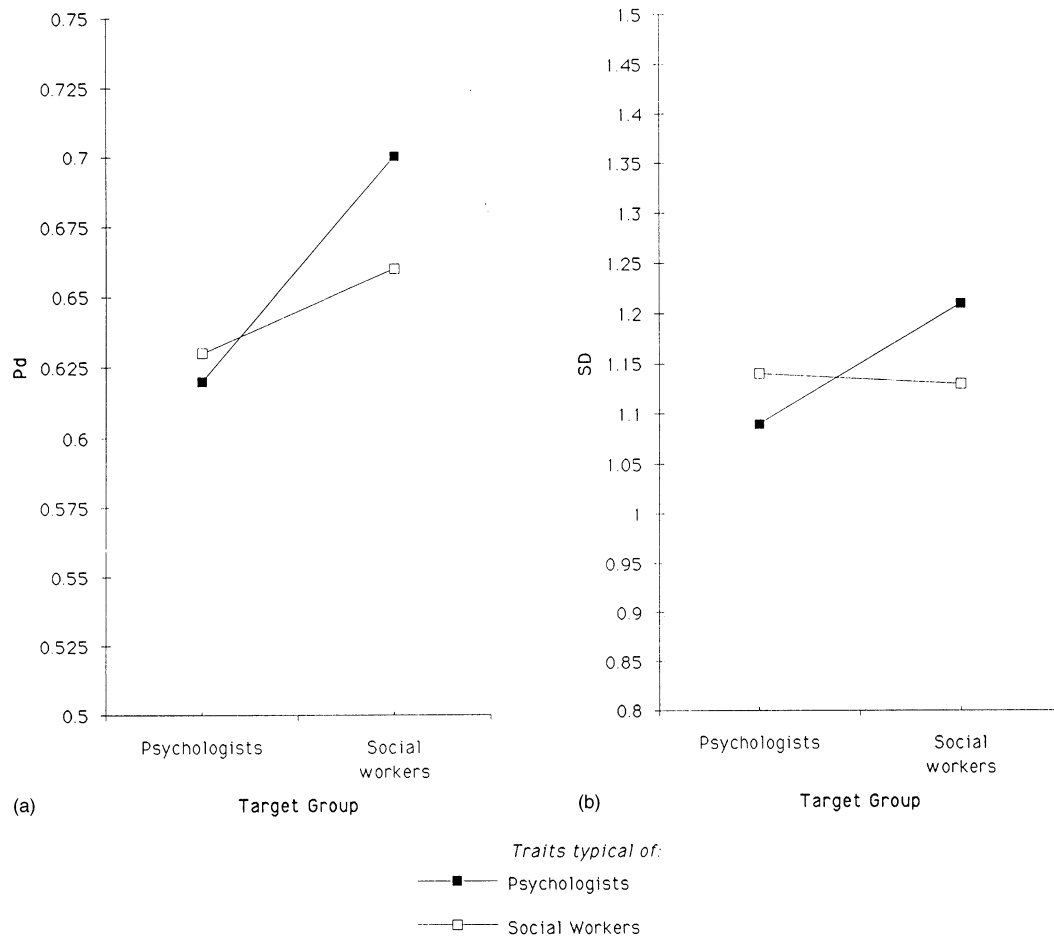


Fig. 2. Judgments of dispersion as a function of target group and trait typicality.

ns. Interestingly, all three two-way interactions came out marginally significant,  $F(1, 37) = 2.00$ ,  $P < 0.17$ ,  $F(1, 37) = 2.67$ ,  $P < 0.12$ , and  $F(1, 37) = 2.07$ ,  $P < 0.16$ , for the interaction involving target group and trait typicality, target group and level of identification, and trait typicality and level of identification respectively.

As far as the interaction involving target group and trait typicality is concerned (Fig. 2a), the pattern reveals that the participants tended to perceive more dispersion among social workers than among psychologists when they were judging attributes typical of psychologists,  $t(37) = 3.62$ ,  $P < 0.001$ . This difference was less important for the attributes typical of the social workers,  $t(37) = 1.62$ ,  $P < 0.12$ .

Turning to the interaction between target group and level of identification (Fig. 3a), the pattern of means suggests that high identifiers tended to perceive psychologists to be more homogeneous,  $Pd = 0.58$ , than social workers,  $Pd = 0.71$ ,  $t(37) = 1.98$ ,  $P < 0.05$ , whereas low identifiers displayed, if anything, the opposite tendency,  $Pd = 0.661$  and  $Pd = 0.641$ , for psychologists and social workers respectively,  $t(37) = 0.31$ , ns. No other effect was significant.

With respect to the S.D. index, no main effect came out as significant, all  $F < 1$ , ns. As was the case for the  $Pd$  index, the interaction involving target group and trait typicality reached a marginal level of significance,  $F(1, 37) = 3.45$ ,  $P < 0.08$ . Fig. 2b shows that psychologists were

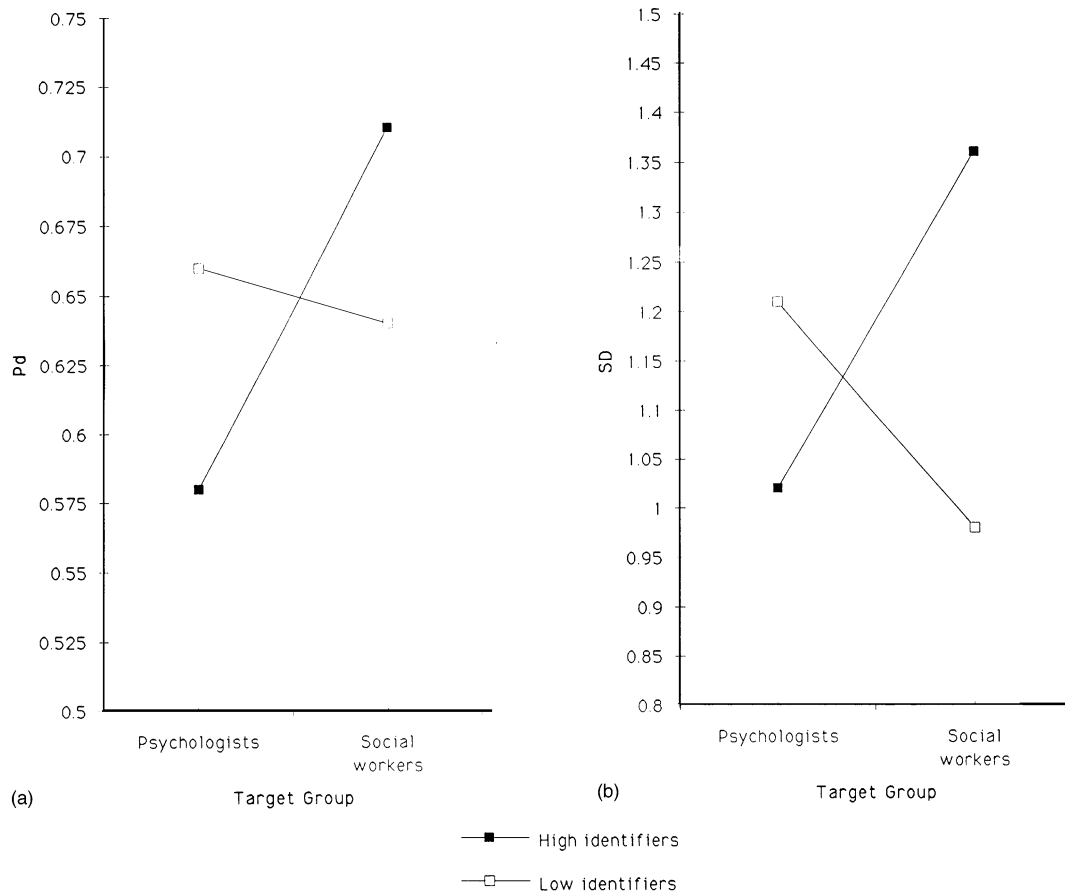


Fig. 3. Judgments of dispersion as a function of target group and level of identification.

perceived to be more homogeneous than social workers on attributes typical of psychologists,  $t(37) = 2.49$ ,  $P < 0.02$ . No such difference emerged for the attributes typical of social workers,  $t(37) = 0.13$ , ns.

The two-way interaction involving target group and level of identification was significant,  $F(1, 37) = 6.45$ ,  $P < 0.02$ . As can be seen in Fig. 3b, the pattern of means reveals that high identifiers saw the psychologists as being more homogeneous, S.D. = 1.02, than social workers, S.D. = 1.36,  $t(37) = 2.11$ ,  $p < 0.05$ , whereas low identifiers had the opposite impression, S.D. = 1.21 and 0.98,  $t(37) = 1.46$ ,  $P < 0.15$ , for psychologist and social workers respectively. No other effect reached a conventional level of significance.

### 11.3. Relative size

The participants also indicated the proportion of psychologists among all Belgian psychologists and social workers. These answers were analyzed by way of a simple  $t$ -test using level of identification as the independent factor. In line with earlier insights linking the perception of being in a minority and the level of identification (Kelly, 1989; Simon, 1992), we found that high identifiers perceived the proportion of psychologists in the larger group of psychologists and social workers to be relatively less important than low identifiers,  $t(37) = 1.70$ ,  $P < 0.10$ . (The question concerning the relative size of the group of psychologists was the same in both target group conditions. Therefore we did not expect any differences. Neverthe-

less, we performed an ANOVA with target group and ingroup identification as between-subjects factors. Neither the target group nor the 2-way interaction effect came out as significant ( $F_s < 1$ ). Comparing the proportion to 50%, our data revealed that high identifiers perceived their own group as a minority,  $M = 41.25$ ,  $F(1, 19) = 7.47$ ,  $P < 0.01$ , whereas low identifiers did not,  $M = 48.85$ ,  $F < 1$ , ns.

## 12. Discussion

On the basis of Study 1, we hypothesized that people's identity concerns influence the perception of variability among ingroup members. To test this idea, we divided the participants of Study 2, all students in psychology, into two groups according to their degree of identification with the larger group of psychologists. Then we presented them with attributes typical of the group of psychologists or typical of the group of social workers. We also decided to confront our participants with an intergroup context i.e. a situation in which the perception of ingroup homogeneity should be maximized.

The findings regarding the central tendencies confirm the fact that all eight attributes were descriptive of both groups but that four of them were more typical of psychologists whereas the four others were more typical of social workers. Interestingly, those participants who identified strongly with their group were very much tempted to use the traits typical of the outgroup to describe their own group.

Given the presence of such group-serving judgments, it is hardly surprising that the target group and the level of identification interacted significantly. Indeed, whether the judgments concerned traits typical of the ingroup or traits typical of the outgroup, high identifiers perceived their group to be more homogeneous than the outgroup. In contrast low identifiers saw the outgroup as being less variable than the ingroup.

For both indicators of perceived dispersion our participants perceived more homogeneity among psychologists, their ingroup, than among social workers, the outgroup, on the attributes typical of

the ingroup. No such difference in variability of the ingroup and the outgroup emerged on the attributes typical of the outgroup. This pattern is the direct consequence of the combined effect of the strong group serving judgments of the high identifiers and the relative lack of concern for ingroup homogeneity of low identifiers.

Globally our dispersion measures failed to reveal a significant three-way interaction. In its own way, this pattern of findings stresses the role of social identification. Indeed it suggests that low identifiers do not see their group as more homogeneous than the outgroup. In contrast high identifiers showed a strong ingroup homogeneity effect.

One indicator of people's degree of identification with a given group is the extent to which group members perceive this group to be relatively less numerous than relevant outgroups (Simon, 1992). The present data confirm that the perceived relative size of the group of psychologists compared to the group of social workers was smaller for high identifiers than for low identifiers.

## 13. General discussion and conclusion

According to Schadron (1991) the mere presence of a group label for the ingroup and for the outgroup is likely to increase the perception of group variability on stereotypical attributes, reversing the well-documented outgroup homogeneity effect into an ingroup homogeneity effect. Using a very different approach Haslam et al. (1995) presented evidence that the ubiquitous outgroup homogeneity effect may rest more upon methodological practice than stable representational aspects of the groups. The fact that researchers tend to request homogeneity judgments about the ingroup in an intragroup context must be contrasted with the fact that homogeneity judgments concerning the outgroup are by definition collected in an intergroup context. Although these two studies greatly differ with respect to their method both of them tackle the same underlying idea: the salience of ingroup boundaries and, as a consequence, a stronger entitativity of the ingroup, may impact upon the evaluation of ingroup homogeneity.



Building upon this line of work, the present set of studies aimed at investigating the impact of contextual factors in the emergence of group homogeneity effects in a more systematic way. A second goal of our studies concerned the influence of motivational factors on ethnocentrism and on the perception of ingroup homogeneity. In Study 1 we asked our participants to estimate the variability of their ingroup or of an outgroup or of both groups on a series of characteristics typical of one or the other group. We predicted that the salience of ingroup boundaries would be higher in the two-group context of judgment, leading to the perception of the ingroup as being more homogeneous than the outgroup. The data provide strong support for our conjecture. The observed pattern is totally in line with self-categorization theory (Turner et al., 1987; Oakes et al., 1994; Turner et al., 1994). Indeed Turner et al. (1987) argued that people tend to perceive the ingroup at lower levels of inclusiveness unless the comparative context introduces an outgroup. Our findings are also compatible with recent work on the role of entitativity in group perception and stereotypes (Yzerbyt and Schadron, 1994, 1996; Brewer et al., 1995; McGarty et al., 1995; Brewer and Harasty, 1996; Yzerbyt et al., 1997).

One important feature of the trait dimensions we presented to the participants is that they were all positive. The absence of an outgroup bias or even an outgroup homogeneity effect on the traits typical of the outgroup lead us to suspect that identification concerns were also at work. Interestingly the data of Study 2 show that whereas high identifiers claimed ingroup superiority on the traits typical of their group they also failed to acknowledge outgroup superiority on those traits typical of the outgroup. Study 2 also directly examined the impact of group identification on the perception of group variability. We hypothesized that the need for strong group boundaries would lead high identifiers, but not low identifiers, to perceive the ingroup as being more homogeneous than the outgroup. The pattern of data confirms our predictions and is fully consistent with recent work on the impact of ingroup identification on ingroup homogeneity

(Kelly, 1989; Doosje et al., 1995; Lee and Ottati, 1995). For instance, Doosje et al. failed to observe different judgments of ingroup homogeneity between high and low identifiers when the status of the ingroup was higher than the status of the outgroup. In sharp contrast, when the status of the ingroup was lower than that of outgroup, high identifiers perceived their group as being more homogeneous than low identifiers.

Finally, we also predicted and found a relation between ingroup identification and the perception of the relative size of the ingroup. Psychologists who identified strongly with their group perceived it as being smaller than low identifiers did, a result that is reminiscent of the findings reported by Simon and Brown (1987). These authors manipulated the relative size of the group and examined the judgments of variability and the level of identification of the group members. Building upon self-categorization theory Simon and Brown (1987) argued that group membership in a numerical minority is more salient than membership in a majority group. As a result members of a minority would perceive greater homogeneity in their group and their level of identification would increase. Although our own data do not speak to the causal sequence involving relative size of the group, level of identification, and homogeneity ratings, the fact that high identifiers saw their group as less numerous than low identifiers even in the case of a real group is most instructive.

As a set, our studies provide strong evidence that ingroup bias is not the only strategy for group members to establish ingroup superiority and thereby maintain or increase their social identity. The present work is only one step in the clarification of the link between ingroup bias and ingroup homogeneity on the one hand and more specific defensive group strategies on the other (Marques and Yzerbyt, 1988; Leyens and Yzerbyt, 1992; Yzerbyt et al., 1995). The use of these various strategies and their link with ingroup identification and ingroup homogeneity perception represents an important question for future research on group relations.

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